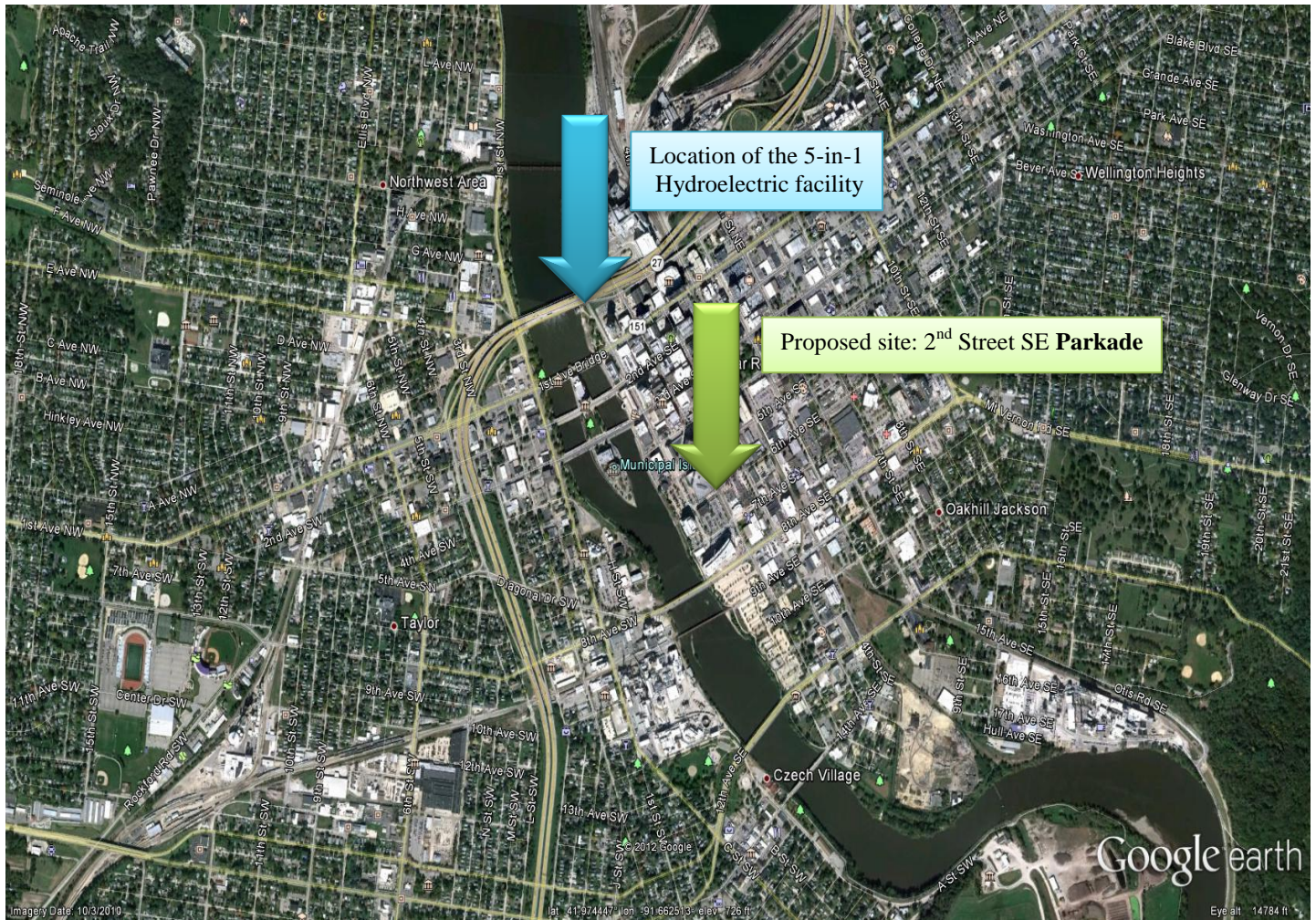


## Appendix A



Source: Google Earth aerial imagery dated October 3, 2010.

**Figure 1:** Aerial photograph of the Cedar Rapids area. The blue arrow indicates the location of the damaged 5-in-1 Hydroelectric facility and the green arrow indicates the proposed location of the 2<sup>nd</sup> Street SE Parkade.





Source: Google Earth aerial imagery dated October 3, 2010.

**Figure 2:** Aerial photograph of the damaged 5-in-1 Hydroelectric facility and vicinity. The blue arrow indicates the location of the 5-in-1 Hydroelectric Dam facility.

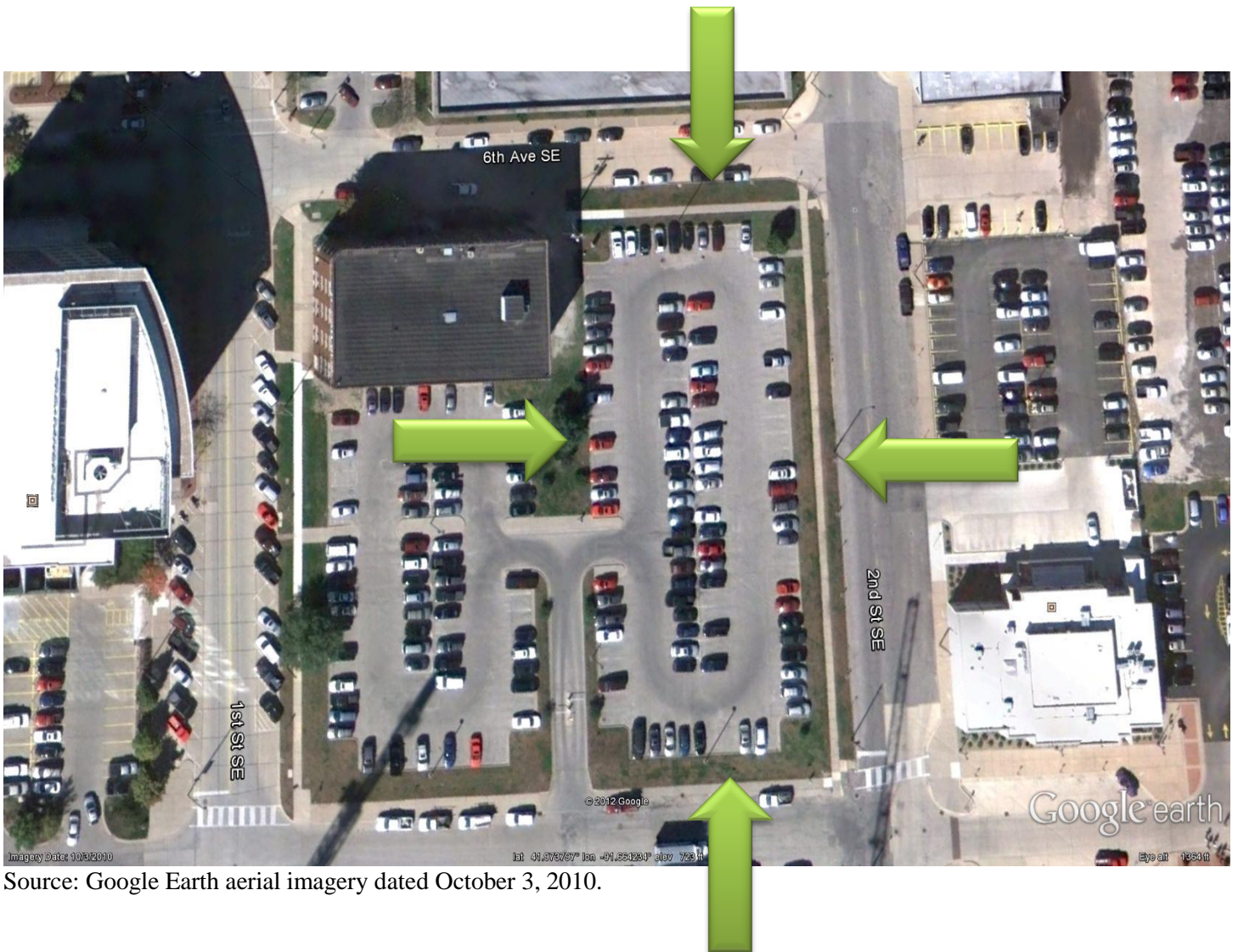




Source: Google Earth aerial imagery dated October 3, 2010.

**Figure 3:** Aerial photograph of the proposed 2<sup>nd</sup> Street SE Parkade and vicinity. The green arrow indicates the proposed location of the 2<sup>nd</sup> Street SE Parkade.





Source: Google Earth aerial imagery dated October 3, 2010.

**Figure 4:** Close-up aerial photograph of the proposed 2<sup>nd</sup> Street SE Parkade. The green arrows indicate the proposed location of the 2<sup>nd</sup> Street SE Parkade.



Source: Provided by the Subgrantee.

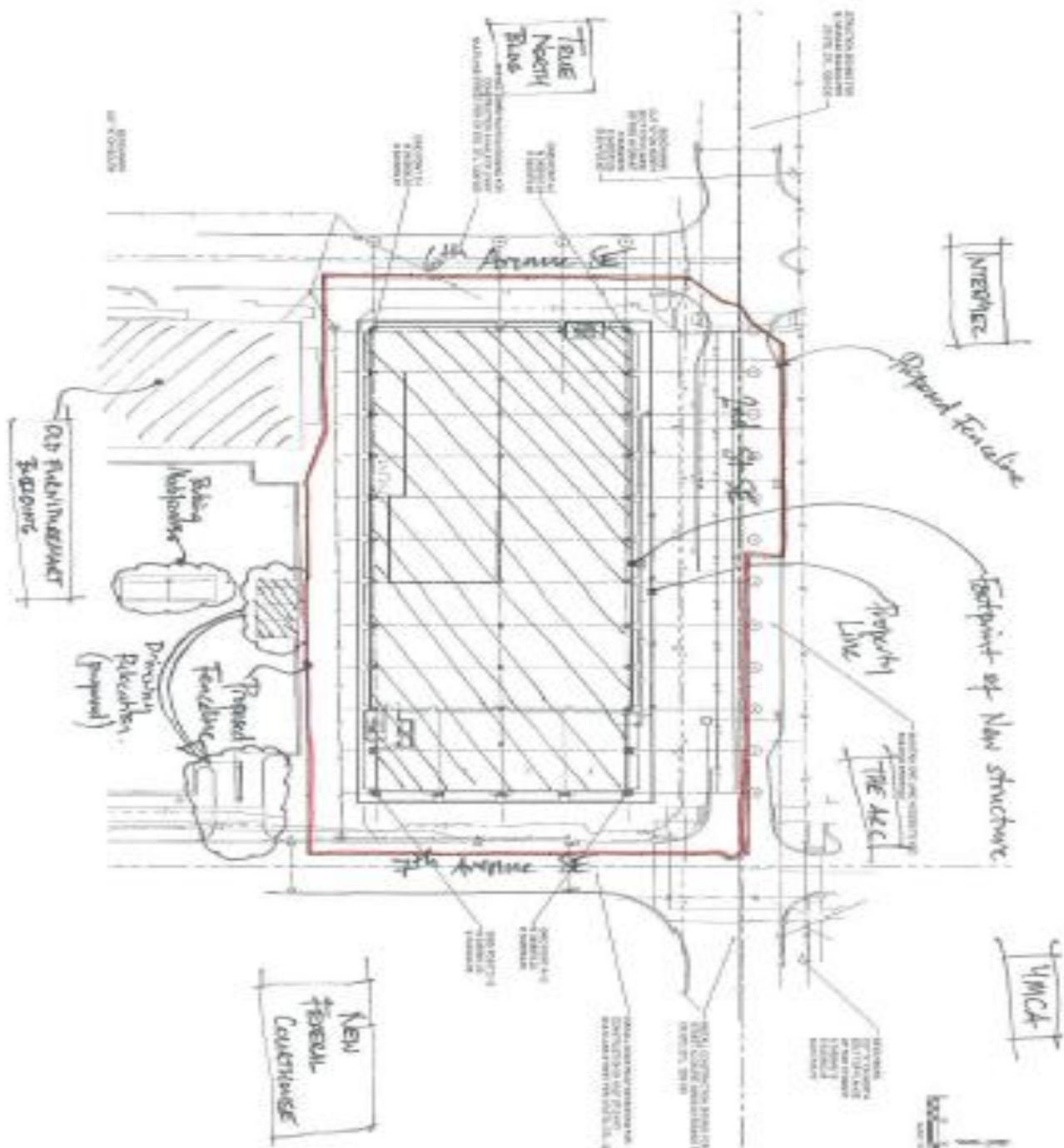
**Figure 5:** Proposed facility footprint for the 2<sup>nd</sup> Street SE Parkade.



Source: Provided by the Subgrantee.

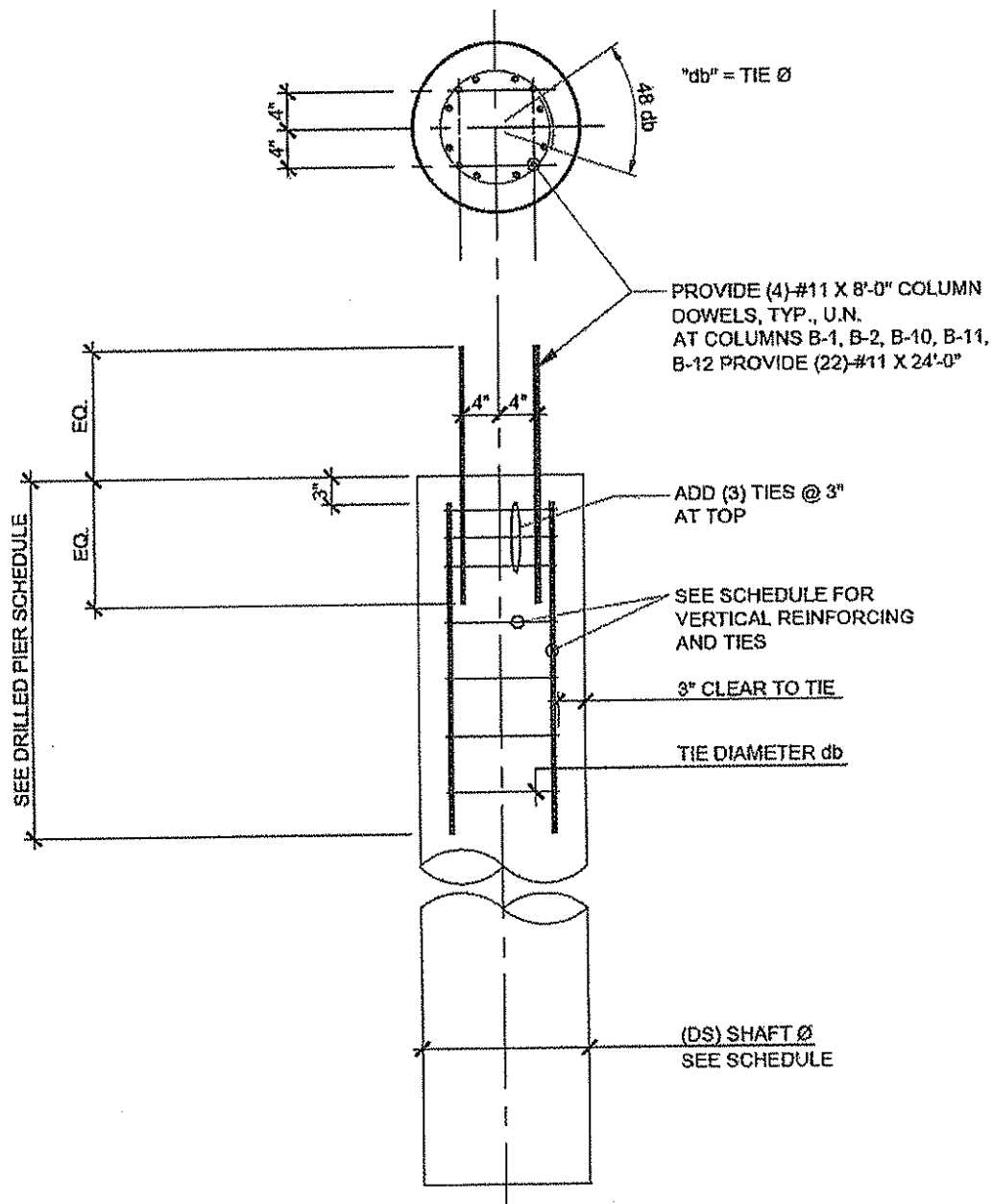
**Figure 6:** Proposed facility rendering of the proposed 2<sup>nd</sup> Street SE Parkade.





Source: Provided by the Subgrantee.

**Figure 7:** Area of potential effects and site plan showing limits of proposed excavation (preliminary) for the proposed 2<sup>nd</sup> Street SE Parkade.

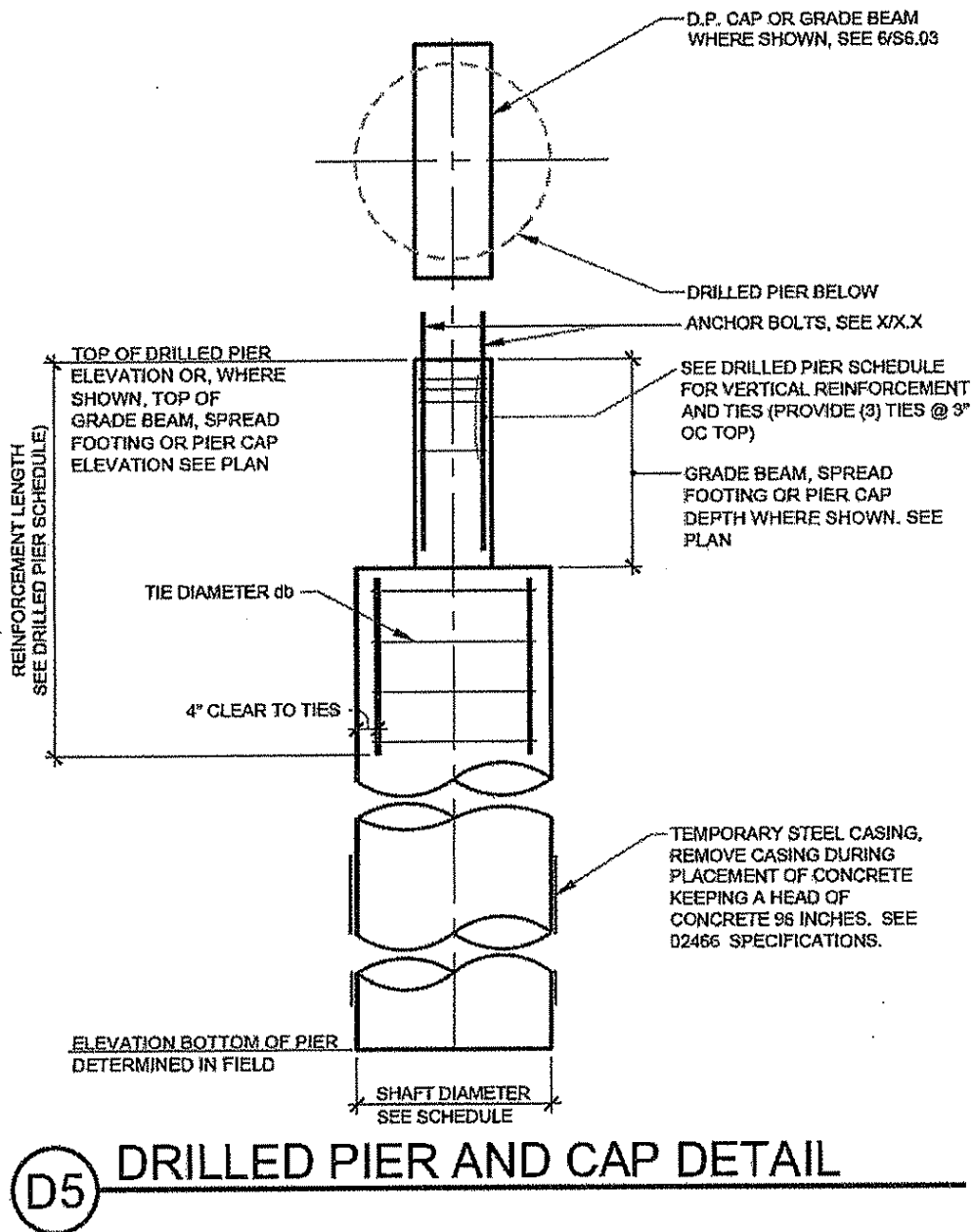


## D1 DRILLED PIER DETAIL

Source: Provided by the Subgrantee.

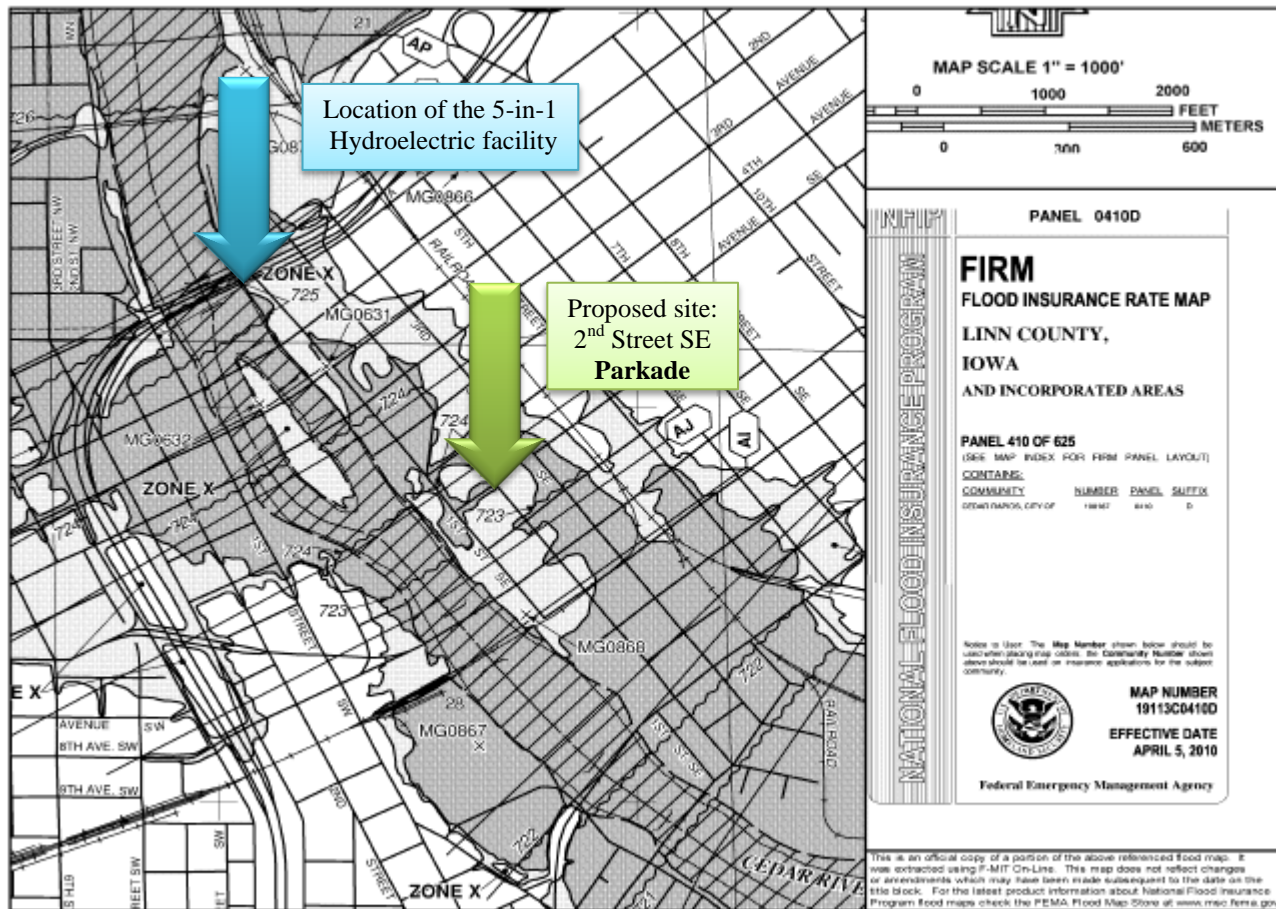
**Figure 8:** Width and depth of proposed excavation for foundation piers for the proposed 2<sup>nd</sup> Street SE Parkade.





Source: Provided by the Subgrantee.

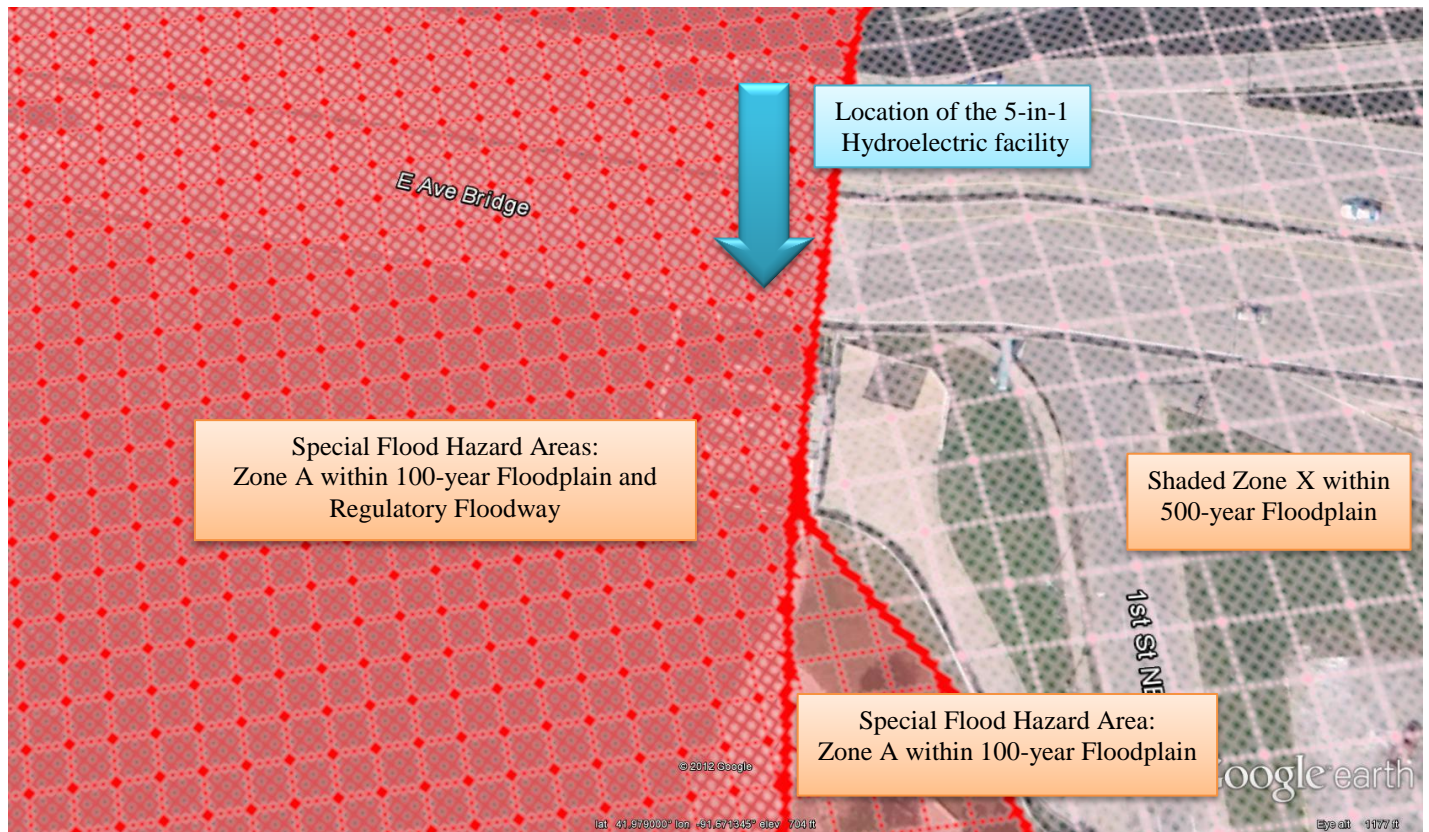
**Figure 9:** Design details of drilled pier and cap for foundation piers for the proposed 2<sup>nd</sup> Street SE Parkade.



Source: FEMA National Flood Insurance Program Flood Insurance Rate Map effective April 5, 2010.

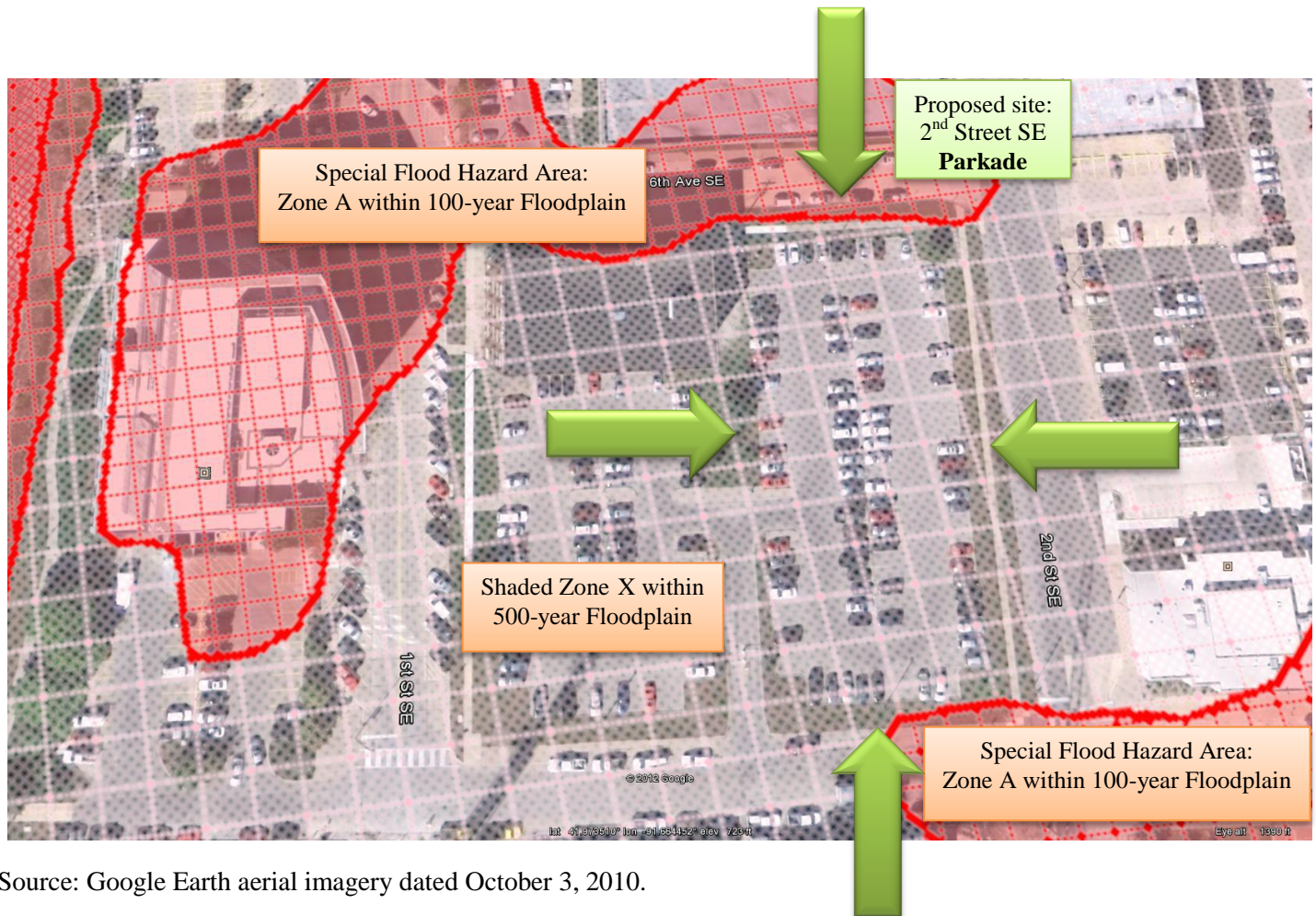
**Figure 10:** National Flood Insurance Program (NFIP) Flood Insurance Rate Map (FIRM) of Cedar Rapids area. FIRM panel number 19113C0410D, effective April 5, 2010, indicates that the location of the 5-in-1 Hydroelectric facility (blue arrow) is in Zone A and in the regulatory floodway of the 100-year floodplain which is within a special flood hazard area. The FIRM indicates that proposed location of the 2<sup>nd</sup> Street SE Parkade (green arrow) is in a Shaded Zone X within the 500-year floodplain and also in Zone A within the 100-year floodplain.





Source: Google Earth aerial imagery dated October 3, 2010.

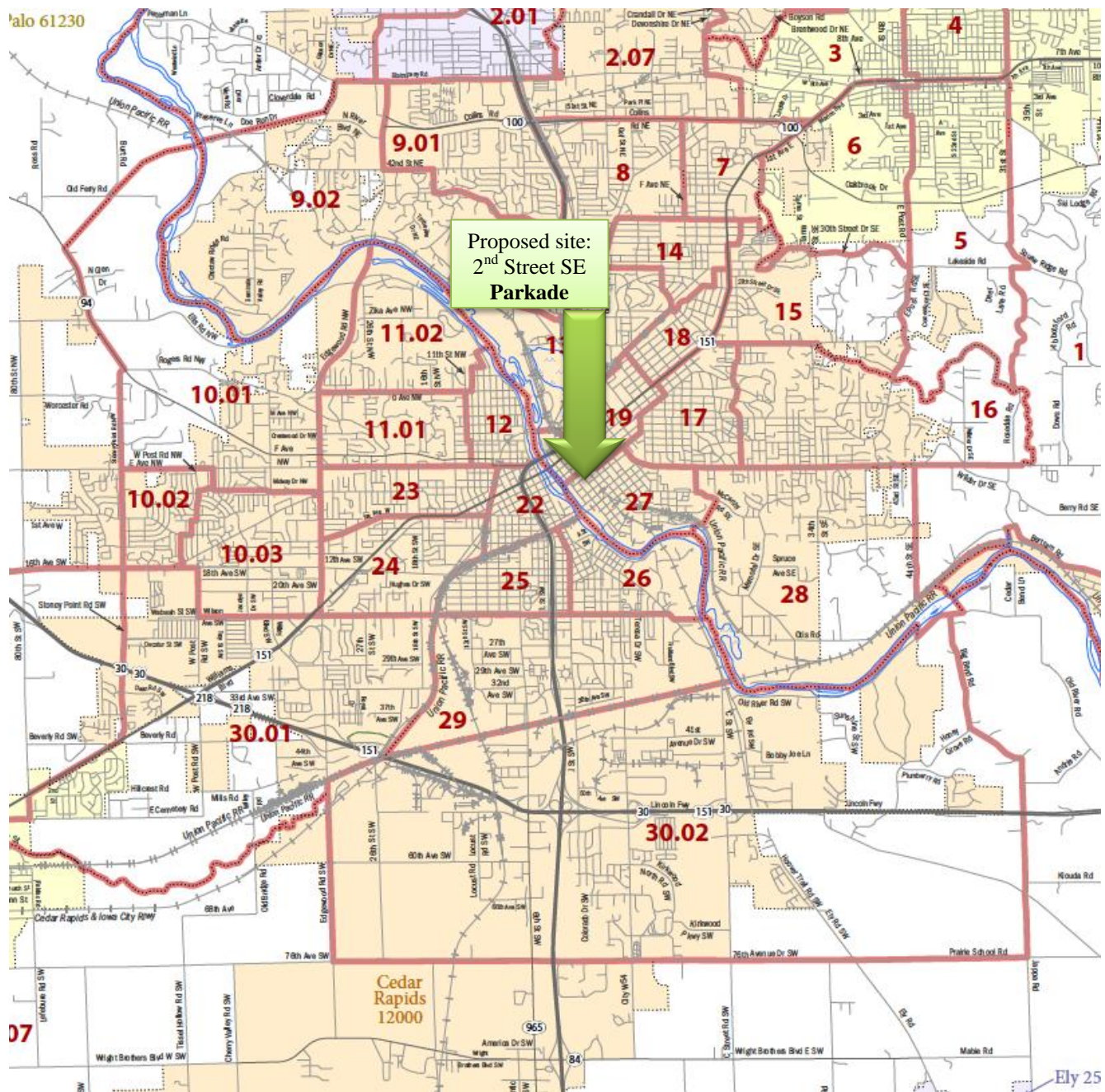
**Figure 11:** Google Earth aerial image with National Flood Insurance Program (NFIP) Flood Insurance Rate Map (FIRM) layer indicates that the location of the 5-in-1 Hydroelectric facility (blue arrow) is in Zone A (large red shaded grids) and the regulatory floodway (small red dotted, red shaded grids) of the 100-year floodplain which is within the special flood hazard area. The large red shaded grids identify Zone A outside the regulatory floodway. The large pink grids indicates Shaded Zone X in the 500-year floodplain.



Source: Google Earth aerial imagery dated October 3, 2010.

**Figure 12:** Google Earth aerial image with National Flood Insurance Program (NFIP) Flood Insurance Rate Map (FIRM) layer indicates that the proposed location of the 2<sup>nd</sup> Street SE Parkade (green arrow) is in a Shaded Zone X within the 500-year floodplain and also in Zone A within the 100-year floodplain. The Zone A is identified by both large red dotted, red shaded grids and large red shaded grids. The Shaded Zone X is the large pink gridded area identifying the 500-year floodplain.





Source: U.S. Census Bureau, 2010American FactFinder

**Figure 13:** 2010 Census Tract Boundaries for Cedar Rapids. The green arrow indicates the proposed location of the 2<sup>nd</sup> Street SE Parkade. The proposed Parkade would be located in Census Tract 27. Census Tract 27 is mainly an urban commercial district with few residents; however this tract has a higher minority and low income proportions compared to Cedar Rapids as a whole.

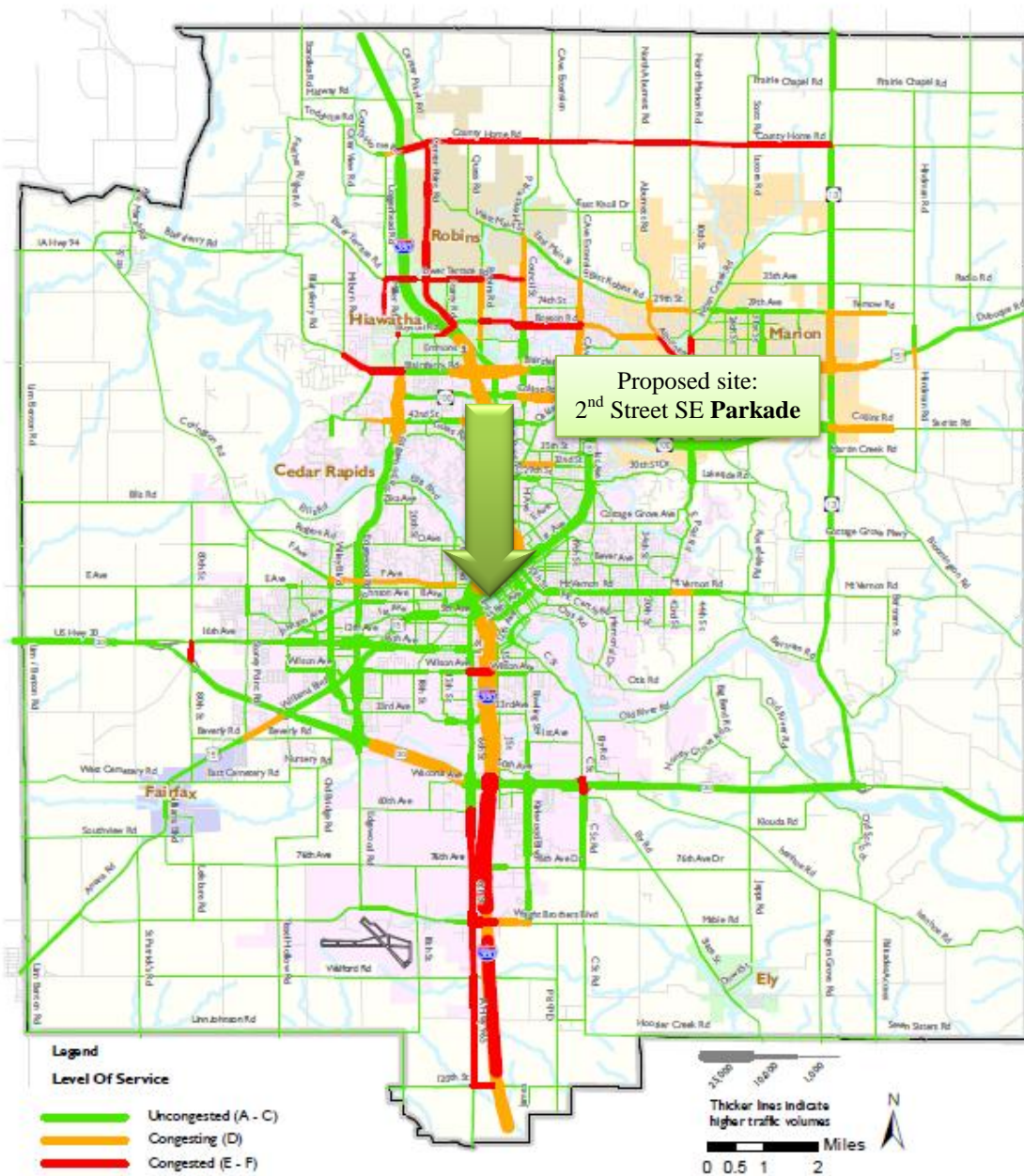
| <b>Socio-Economic Demographics</b>            | <b>Census<br/>Tract 27</b> | <b>Cedar<br/>Rapids</b> |
|---|----------------------------|-------------------------|
| 2010: Housing Units                           | 841                        | 57,217                  |
| 2010: Population                              | 1,549                      | 126,326                 |
| 2010: Minority Population                     | 475                        | 15,182                  |
| 2010: Minority Proportion                     | 30.7%                      | 12.0%                   |
| 2010: Population reporting as Hispanic/Latino | 55                         | 4,176                   |
| 2010: Proportion reporting as Hispanic/Latino | 3.6%                       | 3.3%                    |
| 2010 Population by Age: Under 18              | 307                        | 29,646                  |
| 2010 Population by Age: Proportion under 18   | 20%                        | 23%                     |
| 2010 Population by Age: 18-64                 | 983                        | 80,108                  |
| 2010 Population by Age: Proportion 18-64      | 63%                        | 63%                     |
| 2010 Population by Age: Over 64               | 259                        | 16,572                  |
| 2010 Population by Age: Proportion over 64    | 17%                        | 13%                     |
| 2010 Median Age: Male                         | 39.3                       | 34                      |
| 2010 Median Age: Female                       | 42.1                       | 36.8                    |
| 2000: Median Household Income                 | \$15,110                   | \$43,704                |
| 2000: Poverty Status                          | 491                        | 8,843                   |
| 2000: Poverty Percentage                      | 28.2%                      | 7.5%                    |
| 2010 ACS: Poverty Percentage                  | 42.4%                      | 12.0%                   |
| 2010 ACS: Poverty Margin of Error             | ± 15.2%                    | ± 1%                    |

Source: U.S. Census Bureau, 2010 American FactFinder

**Figure 14:** Select demographic data for Census Tract 27 and Cedar rapids as a whole. This EA uses data from 2010 Decennial Censuses. The American Community Survey (ACS) is also used for rough comparison as the data is more current however the data uses smaller sample sizes and has higher margins of error than the data used in the decennial censuses. Due to the sample size and the methodology used by the ACS, the real levels of population considered in poverty could vary considerably. The estimated proportion of the population of Cedar Rapids determined to be in poverty has increased with a much narrower margin of error due to the significantly larger sample size.



Figure 8-6: 2040 Forecast Daily Traffic Volumes and Levels of Congestion with Existing + Committed Network



The Corridor MPO's 2040 Long Range Transportation Plan

8-13

Source: CMPO

**Figure 15:** Long range transportation plan level of service projections for Cedar Rapids. According to this plan, the area surrounding the proposed location of the 2<sup>nd</sup> Street SE Parkade will become an uncongested area over the coming decades.